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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Alvin J. Marx

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EXAMINER

MATTER, KRISTEN CLARETTE

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/624,870	Applicant(s) MARX, ALVIN J.	
	Examiner KRISTEN C. MATTER	Art Unit 3771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This Action is in response to the amendment filed on 2/20/2008. Claims 1, 2, and 10 have been amended, no claims have been added, and claims 11-19 have been cancelled. Currently, claims 1-10 are pending in the instant application.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Connor (US 4,590,951) in view of Japuntich et al. (US 6,805,124).

Regarding claim 1, O'Connor discloses a air filtering apparatus comprising a face mask (1) adapted to be held on a head by straps (see figure 4), at least one one-way inlet valve (13) mounted on the face mask, a one-way outlet valve (2) for release of exhaust gases, a blower housing (5) positioned apart from said face mask (see Figure 1) and comprising a plurality of walls (Figure 5) defining by a pressure plenum (see reference area 8 in Figure 2 in which air pressure is positive with respect to the pump) and a vacuum plenum (see reference area 10 on Figure 2 in which the air pressure is negative with respect to the pump; also seen as cut-out area within the blower housing in Figure 5), said vacuum plenum defined by a perimeter wall (Figure 5) and a frontal wall (wall where inlet 10 is located), at least one tube (4) connecting the face mask to the blower housing, a blower (col. 3, lines 24-36) within the blower housing between

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said vacuum and pressure plenums (see Figure 5) having an air flow means (i.e., fan) and driven by a power source (6), flow openings (10 and at outlet 8) in the blower housing comprising at least one outlet port (leading to tube 4 from pressure plenum within area indicated by reference character 8) and at least one inlet port (10) in flow communication with said vacuum plenum and defining a flow opening comprising a major portion of an area of said frontal wall (see Figure 5), and at least one removable (via threads) filter cartridge (11) over said at least one inlet port (10).

The difference between O'Conner and claim 1 is a filter being positioned under the exhaust valve. However, Japuntich et al. disclose, in an air filter face mask, a filter positioned under an exhaust valve for allowing rapid evacuation of exhaust gases from the mask while also protecting other persons for being exposed to contaminants in the exhale flow stream (abstract). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided O'Conner's device with an exhalation filter as taught by Japuntich et al. in order to protect other persons from contaminants in the exhale flow path.

Regarding claim 10, the device disclosed by O'Conner and Japuntich et al. has all of the structural limitations needed to perform the recited method steps and is fully capable of doing so. It would have been obvious to one of ordinary skill in the art at the time the invention was made, upon seeing the modified device, to perform the recited method steps of the instant claim (i.e., verifying the filter cartridge is clean) in order to prevent a user from breathing contaminants.

Claims 2-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Conner and Japuntich et al. as applied to claims 1 and 10 above, and further in view of Bar-Yona et al. (US 5,022,900).

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Regarding claim 2, the modified O'Conner device is silent as to the at least one filter cartridge having two separate parallel filters each secured by wire mesh. However, Bar-Yona et al. disclose a filter cartridge for use in a forced ventilation apparatus comprising two filters (22 and 24) that can be considered parallel (i.e., see Figures 4-5 in which the cross-section of the two filters are positioned parallel to each other) and each secured by wire mesh (26) (see Figures 3-4 and column 3, lines 5-10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a filter cartridge with two separate parallel filters secured by wire mesh as taught by Bar-Yona et al. in the modified O'Conner device because it would have provided a means for removing both particulates and gaseous contaminants from the air. Furthermore, O'Conner discloses that the filter cartridge can comprise particulate and/or gas vapor material (column 3, lines 30-35), so it appears as though the modified device would perform equally well with the filter cartridge disclosed by Bar-Yona et al.

Regarding claims 3 and 4, O'Conner discloses the filter cartridges can be threaded to the housing (column 3, lines 30-35). The external and internal threads on the cartridge and housing would constitute channels and a corresponding number of connectors.

Regarding claim 5, O'Conner discloses batteries (6).

Regarding claim 6, O'Conner discloses a fan for producing the air flow (column 3, lines 24-26).

Claims 7-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Conner, Japuntich et al., and Bar-Yona et al. as applied to claims 2-6 above, and further in view of Elstran et al. (US 5,592,935). The modified O'Conner device is silent as to primary tubing

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connected to the blower housing and two lengths of secondary tubing connected to the primary tubing by a y-connector and to the face mask by a gasket. Elstran discloses an air filtering device comprising primary tubing (36) connected to a source of positive pressure (38) and two lengths of secondary tubing (see Figure 11) by a y-connector (36). The secondary tubing is connected to a face mask by gaskets (55). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a tubing assembly comprising primary tubing and two lengths of secondary tubing as taught by Elstran et al. in the modified O'Conner device in order to keep the respirator evenly balanced on the user's head and to better distribute the weight of the device. In addition, it appears as though the device disclosed by O'Conner would perform equally well with secondary tubing as disclosed by Elstran et al.

Response to Arguments

Applicant's arguments filed 2/20/08 have been fully considered but they are not persuasive.

As discussed above, the device of O'Conner does in fact disclose the pressure plenum and vacuum plenum on either side of a blower as clearly seen in Figure 5. The limitation of the inlet openings making up a "major" portion of the frontal wall of the blower housing does not add any definite structural limitation to the claims and as seen in Figure 5 of O'Conner, the inlets (10) can clearly be considered to make up a major or substantial portion of the frontal wall because air flow passes through them in a sufficient amount to allow a wear to breath normally.

In addition, the limitation of the term "separate parallel filters" does not limit the filters to not being a two-stage filter because as discussed above, the filters (22 and 24) are clearly

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separate and are arranged parallel to each other within the canister (see Figure 4 or Bar-Yona et al.). The term “parallel” as it appears in claim 1 does not limit the filters to being positioned so that the air flow runs in a parallel manner through them (i.e., as opposed to a series-types flow) as is argued by the applicant on pages 11-12.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kristen C. Matter whose telephone number is (571) 272-5270. The examiner can normally be reached on Monday - Friday 9-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Justine Yu can be reached on (571) 272-4835. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kristen C. Matter/
Examiner, Art Unit 3771

/Justine R Yu/
Supervisory Patent Examiner, Art Unit 3771